UNITED STATES PATENT AND TRADEMARK OFFICE

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10/642,932	08/18/2003	Nathan Eldon Nesbit	MSFT121134	4284

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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 February 2007*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   This action is in response to the amendment filed on 2/14/2007.

2.   Claims 1, 5, and 17 have been amended.

3.   Claims 1-21 are pending.

4.   Claims 1-21 stand finally rejected.

Response to Amendment

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1-21 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Tse, US

5,742,754A (hereinafter Tse), in view of Ousterhout et al., US 2004/0194060 A1 (hereinafter Ousterhout).

Per Claim 1 (Currently amended):

        Tse teaches a method for generating a test suite for a current software build (Tse, FIG. 1, steps

10-20, col. 1, lines 49-67 through col. 2, lines 1-2), comprising: obtaining a current software build (Tse,

FIG 1, steps 10 and 20, col. 1, lines 34-40, "a user identifies a software product for testing and provides it

to a test engineer"; col. 20, lines 9-15, "the normal product build (i.e., binary instructions) is loaded onto a

user-selected test computer system"); obtaining a reference software build (Tes, FIG. 1, steps 12-14, col.

1, lines 49-62, "the test coverage build process allows test engineers to identify regions of the source

code for special consideration....if the user desires test coverage testing in step 12, the method proceeds

to step 14 where a test coverage build is performed"); generating a focused test suite from a master test

suite according to the identified areas that, when executed, will exercise at least one identified area of the

current software build that has been modified with regard to the reference software build (Tse, FIG. 1,

step 18, col. 1 lines 64-67, "the method proceeds to step 18 where a test suite is provided for product

verification"; col. 2, lines 14-21, "the test suite provided in step 18 is executed...if test coverage was

desired in step 12, then a test coverage data file will be generated indicating the exercised regions of

software product code (emphasis added)"); Tse does not explicitly teach comparing the current software

build to the reference software build to identify areas of the current software build that have been modified

with regard to the reference software build. However, Ousterhout teaches comparing the current software

build to the reference software build to identify areas of the current software build that have been modified

with regard to the reference software build (Ousterhout, FIG. 7, [0076], "when Job C completes at tiem t3,

the usage data indicates that foo.c was read and used to generate the target file of Job C. By comparing

the versin of foo.c actually use by Job C...with the most recent version of foo.c which would have been

used in a sequential build (i.e., the version of foo.c modified by Job B), the conflict detection module 404

generates a conflict"; [0046], "the term "job' refers to any individual portion of a program build")

It would have been obvious to one having ordinary skill in the computer art at the time of the

invention was made to modify the method disclosed by Tse to include "comparing the current software

build to the reference software build to identify areas of the current software build that have been modified

with regard to the reference software build" using the teaching of Ousterhout. The modification would be

obvious because one of ordinary skill in the art would be motivated to employ sophisticated techniques for

monitoring and analysis during the program build process to enable high level of parallelism (Ousterhout,

[0037], lines 1-4).

Per Claim 2:

Tse does not explicitly teaches generating information identifying areas of the current software

build that have been modified with regard to the reference software build that cannot be exercised by at

least one test in the master test suite. However, Ousterhout teaches generating information identifying

areas of the current software build that have been modified with regard to the reference software build

that cannot be exercised by at least one test in the master test suite (Ousterhout, FIG. 4a, Conflict

Detection 404, [0072], "terminator 402 invokes its conflict detection module 404 to determine if "Job N"

created a conflict"; [0064], lines 1-2, "the term "job" refers to any individual portion of a program build"; [0104], "the conflict detection module 404 is able to compare the file versions used in each job with the correct file versions (i.e., those which would have been used in a sequential build"; [0076], lines 4-14, the "last modified" timestamp, and FIG. 3b, [0077]).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the method disclosed by Tse to include "generating information identifying areas of the current software build that have been modified with regard to the reference software build that cannot be exercised by at least one test in the master test suite" using the teaching of Ousterhout. The modification would be obvious because one of ordinary skill in the art would be motivated to employ sophisticated techniques for monitoring and analysis during the program build process to enable high level of parallelism (Ousterhout, [0037], lines 1-4).

Per Claim 3:

Tse does not explicitly teach the current software build is compared to the reference software build according to the modification dates of corresponding source files found in both the current software build and the reference software build. However Ousterhout teaches the current software build is compared to the reference software build according to the modification dates of corresponding source files found in both the current software build and the reference software build (the "last modified" timestamp, FIG. 7, [0076], lines 4-14).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the method disclosed by Tse to include "teach the current software build is compared to the reference software build according to the modification dates of corresponding source files found in both the current software build and the reference software build" using the teaching of Ousterhout. The modification would be obvious because one of ordinary skill in the art would be motivated to employ sophisticated techniques for monitoring and analysis during the program build process to enable high level of parallelism (Ousterhout, [0037], lines 1-4).

Per Claim 4:

Tse does not explicitly teach the current software build is compared to the reference software build by comparing the executable codes for a routine found in both the current software build and the reference software build. However, Ousterhout teaches the current software build is compared to the reference software build by comparing the executable codes for a routine found in both the current software build and the reference software build (Ousterhout, FIG. 4a, Conflict Detection 404, [0072], "terminator 402 invokes its conflict detection module 404 to determine if "Job N" created a conflict"; [0064], lines 1-2, "the term "job" refers to any individual portion of a program build"; [0095], "the conflict detection module 404 detects conflicts ...uses the current time instead of the job's start time. It then compares this version with one actually used"; [0104], "the conflict detection module 404 is able to compare the file versions used in each job with the correct file versions (i.e., those which would have been used in a sequential build").

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the method disclosed by Tse to include "the current software build is compared to the reference software build by comparing the executable codes for a routine found in both the current software build and the reference software build" using the teaching of Ousterhout. The modification would be obvious because one of ordinary skill in the art would be motivated to employ sophisticated techniques for monitoring and analysis during the program build process to enable high level of parallelism (Ousterhout, [0037], lines 1-4).

Per Claims 5 (Currently amended), 6-8:

These are the system version of the claimed method discussed above (claims 1-4), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also obvious.

Per Claims 9-12:

These are another method version of the claimed method discussed above (claims 1-4), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above, including "testing the current software build using the focused test suit (Tse, col. 2, lines 14-21, "the test suite provided in step 18 is executed...if test coverage was desired in step 12, then a test coverage data file will be generated indicating the exercised regions of software product code)". Thus, accordingly, these claims are also obvious.

Per Claims 13-16:

These are another system version of the claimed system discussed above (claims 5-8), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above, including " a test means that exercises the focused test suit on the current software build (Tse, col. 2, lines 14-21, "the test suite provided in step 18 is executed...if test coverage was desired in step 12, then a test coverage data file will be generated indicating the exercised regions of software product code)". Thus, accordingly, these claims are also obvious.

Per Claims 17 (Currently amended), 18-21:

These are the computer-readable medium version of the claimed method discussed above (claims 9-12), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also obvious.

Response to Arguments

7.   Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136 (a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
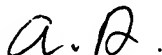
9.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anna Deng whose telephone number is 571-272-5989. The examiner can normally be reached on Monday to Friday 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Zhen can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC2100 Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WEI ZHEN
SUPERVISORY PATENT EXAMINER

Anna Deng
April 26, 2007